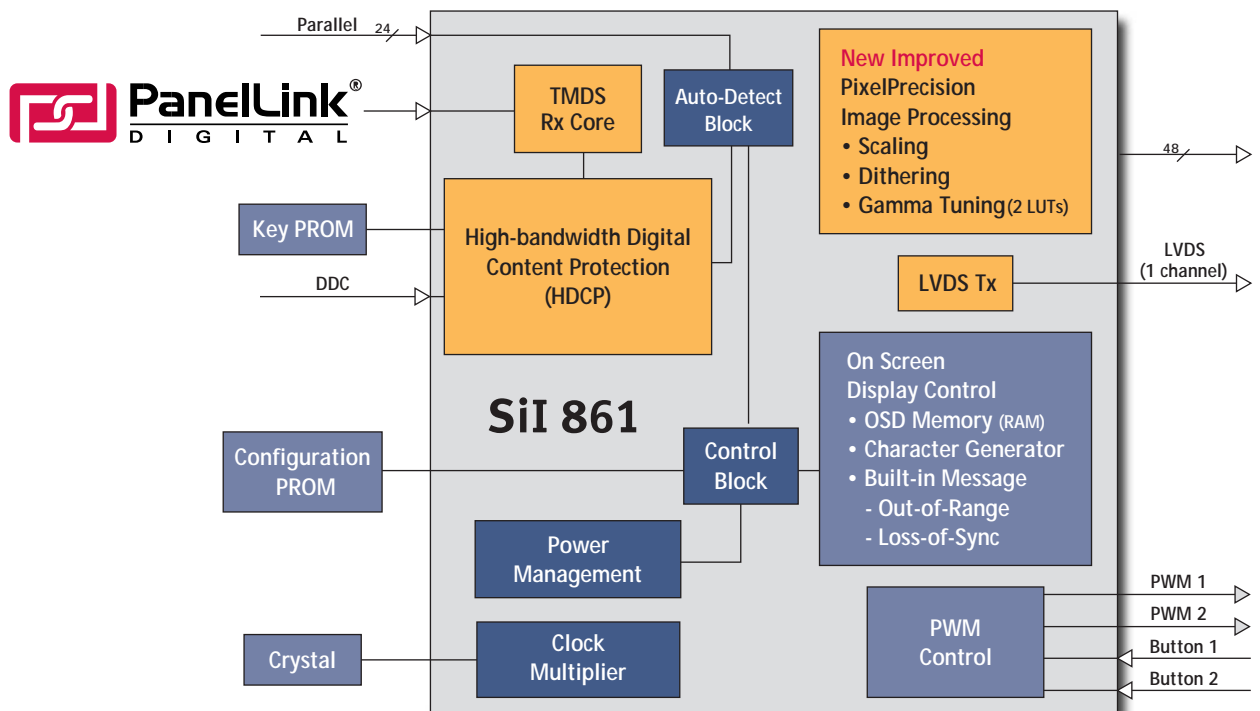


Continuing our tradition of providing the world's most advanced and highest performance monitor controller solutions, Silicon Image presents the Sil 861 PanelLink<sup>®</sup> Monitor Controller. The Sil 861 is a single-chip solution that provides all the functionality required for high-end, pure digital flat panel monitors with resolutions up to SXGA+(1400X1050). The Sil 861 offers technological advances and features designed to simplify any flat panel monitor design. And since PanelLink is the most widely adopted DVI implementation with over 10 million PanelLink products shipped to-date, compatibility to all DVI hosts is guaranteed.

Incorporating Silicon Image's production proven PanelLink digital receiver, the Sil 861 also accepts digital entertainment video that has been encrypted and protected using High-bandwidth Digital Content Protection (HDCP), an extension of the Digital Visual Interface (DVI) and supported by Motion Picture Association (MPA) member companies. The Sil 861's integrated Low Voltage Differential Signaling (LVDS) transmitter is compatible with all single-channel LVDS panels further reducing total system costs. Additionally the Sil 861's new improved PixelPrecision<sup>™</sup> image processing provides the best scaling and color management available on the market today.

As a single-chip solution, the Sil 861 lowers overall cost, increases reliability, requires less board space, and facilitates easier design and layout. The Sil 861 enables monitor designers to deliver the highest quality, DVI-compliant monitors at costs attractive for mass-market adoption.



## Sil 861 Features

### PanelLink® Monitor Controller

- Provides consistent highest quality pure digital visual experience
- Enables easy development of DVI-compliant, pure digital LCD monitors
- Eliminates analog image processing artifacts ("Pixel Dust")
- A cost effective, single-chip solution

### Inputs

- PanelLink Digital receiver
  - Widest adopted DVI implementation
  - Compatible to all DVI hosts and displays
  - High bandwidth (25-140 mpps)
  - Supports all input resolutions up to SXGA+(1400X1050)
- High-bandwidth Digital Content Protection
  - Accepts encrypted and protected digital entertainment video using HDCP for DVI
  - Robust, cost-effective and transparent method for receiving digital entertainment, enabling viewing of HDTV and SDTV movies
  - Supported by MPA member companies
  - Extends PC security to the display
- Parallel 24-bit RGB digital input
  - Supports dual digital monitors

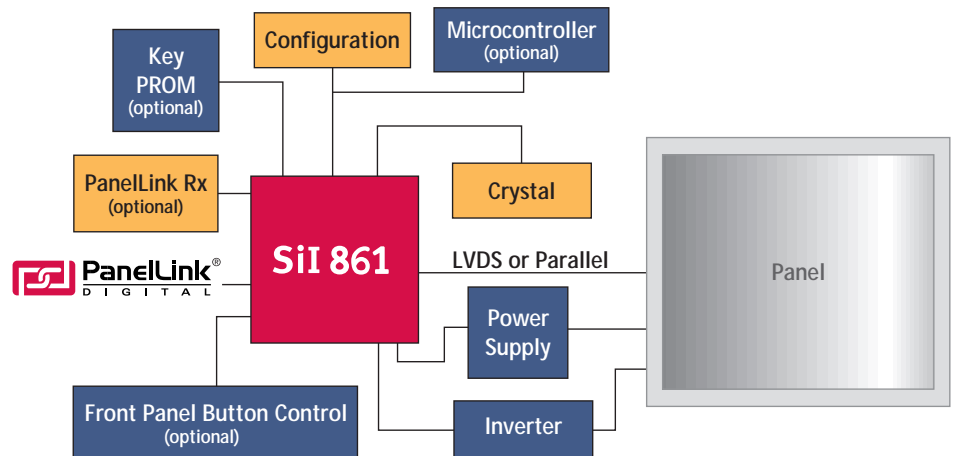
### Outputs

- LVDS Transmitter
  - Compatible with single channel LVDS panels
  - Improves reliability, lowers total system cost and board space requirements
- Parallel 24-bit One-pixel/clock or 48-bit Two-pixel/clock output
  - Flexible interface supports all panel resolutions up to SXGA+
  - True color (16.7 million) support

### New Improved PixelPrecision™ Image Processing

- Scaling Algorithm
  - Finite impulse response filter provides high image quality for both text and graphics using positive and negative weighting

Part Number - SiI861CM208



- Frame rate preservation locks outgoing frame rate to prevent temporal artifacts such as jitter<sup>1</sup> and tearing<sup>2</sup>
- Automatically upscales any lower resolution input to any output resolution up to SXGA+
- Color Management
  - Advanced dithering algorithm allows 24-bit true color (16.7 million) to be shown on 18-bit TFT panels
  - Two programmable look-up gamma tables can be used to optimize gamma, color temperature and contrast for movies as well as graphical inputs

### Smart Integration Enables Lower Cost Systems and Speed To Market

- No External Microcontroller or Memory Required
- On-Screen-Display (OSD)
  - Advanced programmable OSD allows for localized messaging for specific regions and market segments
  - RAM-based character mapped OSD
  - Built-in loss-of-sync and out-of-range functions
- Internal Clock Multiplier
  - 5X clock multiplier, allows use of lower cost, lower frequency crystal or oscillator
- Power Management
  - Supports DVI power management functionality

## Silicon Image's Sil 861 Starter Kit

The CP861DVI Starter Kit includes all the hardware, software and documentation to quickly bring new pure digital, DVI-compliant monitors to production. The Sil Digital Visual Editor is a Windows-based GUI utility that allows (Read/Write) access to the various Sil 861 registers, EDID EEPROM registers and to the configuration EEPROM. The 8051 firmware allows you to control the flat panel power sequencing, backlight, and all of the OSD messages. The complete firmware source code is included for customization.

### Contents include:

#### Hardware

- Sil 861 reference design board
- Matrox G400 DVI-compliant graphics card
- Power supply and cables

#### Software

- HDCP evaluation software
- Sil's Digital Visual Editor
- 8051 firmware with source code
- Evaluation C compiler
- Sample OSDs for reference

#### Documentation

- Sil 861 starter kit user's guide
- Sil 861 data sheet
- Reference schematics
- Application notes

<sup>1</sup> Jitter - Objects moving in abrupt steps across the screen.  
<sup>2</sup> Tearing - The screen splits from one image to the next along a horizontal line.